

Amendments to the Claims:

This listing of claims will replace all prior versions, and listing, of claims in the application.

Listing of Claims:

Claim 1 (previously amended)  
Claim 2 (cancelled)  
Claim 3 (previously amended)  
Claim 4 (cancelled)  
Claim 5 (previously amended)  
Claim 6 (previously amended)  
Claim 7 (previously amended)  
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Claim 9 (previously amended)  
Claim 10 (previously amended)  
Claim 11 (cancelled)  
Claim 12 (cancelled)  
Claim 13 (cancelled)  
Claim 14 (previously added)  
Claim 15 (previously added)  
Claim 16 (currently amended)  
Claim 17 (previously added)  
Claim 18 (previously added)  
Claim 19 (currently amended)  
Claim 20 (previously added)

CLAIMS:

1. (Previously Amended)

A mobile communication system, for broadcasting a message to not more than a specified number of mobile stations out of a plurality of mobile stations located within a designated communication area, comprising:

location receipt and storage means for receipt and storage of the locations of said plurality mobile stations transmitted to the receipt and storage means by the mobile stations over a communications network and the internet;

personal information database means for personal information about each mobile station user's interests and/or personal tastes;

designation accepting means for accepting the designation of said communication area based on the stored locations;

mobile station selection means for selecting the specified number mobile stations to be called out of the plurality of mobile stations based on said accepted communication area, the stored locations of said mobile stations and the personal information contained in the personal information database means; and

calling means, for broadcasting the message to said selected mobile stations to be called while keeping a count of the number of the mobile stations already called to assure the assigned specified number of mobile station recipients called is not exceeded.

2. (Cancelled)

3. (Previously Amended)

The mobile communication system according to claim 1, wherein, said designation accepting means accepts the designation of a time zone; and

a limit on the effective time within the time zone for each user.

4. (Cancelled)

5. (Previously Amended)

The mobile communication system according to claim [[4]] 1, wherein each of said plurality mobile stations includes:

a GPS location detection means in each of the mobile stations to detect the location of the mobile station containing the location detection means; and

location notification means for notifying said calling device of the detected location of said mobile station.

6. (Previously Amended)

A mobile communication system for providing information concerning one or more mobile stations located within a designated communication area, each of said mobile stations comprising:

designation accepting means, for at the least accepting the designation of said communication area;

information transmission means, for transmitting from one mobile to another mobile station information including the one mobile stations phone number designation of said accepted communication area, the areas radius centered at the one mobile station and location data from a GPS system in the one mobile station;

information receiving means at the another mobile station, for receiving said transmitted information;

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a GPS location detection means in the another mobile station, for detecting the location of the another mobile station; and

information provision means, for providing information between the one and another mobile stations when the detected location of said another mobile station is within said communication area included in said received information.

7. (Previously Amended)

A mobile communication method, for sending a message to no more than a specified number of mobile stations out of a greater plurality of mobile stations located within a designated communication area, said method comprising the steps of:

generating with a GPS in each of the plurality mobile stations the latitude and longitude location of the mobile station containing GPS location detection means;

receiving at an internet server from each of the plurality of mobile stations their latitude and longitude locations over a communications network;

storing the locations of said plurality mobile stations along with personal information about each of the mobile station users personal interests and/or preferences in the internet server;

accepting the designation of said communication area;

selecting from the plurality mobile stations the specified number of mobile stations to be called based on said accepted communication area, the stored locations of said mobile stations, and the personal information of the users of the mobile stations; and

calling said selected mobile stations to be called sequentially keeping count of the number called so that the number of mobile stations called does not exceed the specified number.

8. (Previously Amended)

A mobile communication method for providing information concerning one or more mobile stations located within a designated communication area, the method of operation between said mobile stations comprising the steps of:

providing for two ranges of communication areas for mobile stations, one being an absolute effective range and the other a relative effective range;

using a GPS system in one mobile station to determine the location of the one mobile station when effective range is used for communication;

transmitting over a communications network from the one mobile station to another mobile station information including the designation of said accepted communication area, its radius centered at the one mobile station and the phone number of the one mobile station;

receiving said transmitted information at said another mobile station;

detecting at the another mobile station the location of said one mobile station from information provided by said one mobile station; and

providing information from the another mobile station to the one mobile station when the GPS system of the another mobile station determines the detected location of said one mobile station is within said communication area included in said received information.

9. (Previously Amended)

A recording medium for one mobile station of a mobile communication system that comprises a base station to be connected by radio to a plurality of mobile stations, and a calling device that includes location storage means, designation accepting means, mobile station selection means and calling means for calling other mobile station

directly or via said base station, said recording medium storing a program to permit a computer to execute the steps of:

detecting the location of the one mobile station containing the program at mobile station using a GPS location device in the one mobile station;

notifying said calling device over a communications network of a relative effective range to transmit from the detected location of said one mobile station directly to another of said mobile stations; and

providing to the another said mobile station the telephone number of the one mobile station, the location of the one mobile station and the radius of the relative effective range.

10. (Previously Amended)

A computer program product on a recording medium for inclusion in mobile stations of a mobile communication system for providing information concerning one or more mobile stations located within a designated communication area, said recording medium including:

software for accepting the designation of said communication area from a GPS system in one mobile station;

software for transmitting from the one mobile station to the other mobile stations information including the designation of said accepted communication area which is centered at the location of the one mobile station;

software for receiving said transmitted information;

detecting the location of the one mobile station at other of mobile stations from information provided by the GPS device of the one mobile station; and

providing information to the mobile communication system over a communication network in the system when the detected location at other mobile stations is within said communication area included in said received information.

11. (Cancelled)

12. (Cancelled)

13. (Cancelled)

14. (Previously added)

The mobile station system of claim 1 including:

a server on the internet containing messages in an internet mail form format, the server having a server database containing the location receipt and storage means and the personal information database means with data correlated with phone numbers of the mobile station;

a portable telephone system including a plurality of base stations with at least one of the base stations covering the designated communication area and other base stations covering other designated communication areas, and the mobile stations which may be in one or more of the designated areas with the base stations providing data in a short form format to the mobile stations each identified by a telephone number; and

a gateway for converting between data in short form and internet mail form.

15. (Previously added)

The mobile station system of claim 14, wherein the internet address of each user includes the phone number of the user's mobile station.

16. (Currently amended)

The mobile communication system of claim 15, wherein the information in the database correlated to each user's mobile station number includes:

the user's phone number or name;

a ~~"message ID"~~ message ID which is used by the mobile station to manage received time-space information;

a ~~"category"~~ category reflecting the user's personal interests used to determine a reduced number of distribution destinations of transmission information when the number of mobile stations present in the ~~"effective range"~~ effective range exceeds a ~~"maximum number of recipients"~~ maximum number of recipients;

an ~~"effective time"~~ effective time which provides the date on which transmission information becomes invalid;

an ~~"effective range designation method"~~ effective range designation method for designating the locational range of a mail distribution destination for the mobile station when ~~"1"~~ 1 is entered for the ~~"effective range designation method"~~ effective range designation method an absolute effective range designation is used; when ~~"2"~~ 2 is entered, it means a relative effective range designation is used;

an ~~"effective range"~~ effective range numerical value that specifically limits the locational range of the mail distribution destination; when ~~"1"~~ 1 is entered for the ~~"effective range designation method"~~ effective range designation method the ~~"effective range"~~ is a set of numerical values comprising the latitude and the longitude at the center of the locational range of a mail distribution destination and the radius of the range; when ~~"2"~~ 2 is entered for the ~~"designation method"~~ designation method a pair of two numerical values comprising the user name of a mobile station located at the center of the locational range of a mail distribution destination and the radius of the range;



a ~~"maximum number of recipients"~~ maximum number of recipients lists the maximum number of mobile stations to which information is to be transmitted when the number of destinations is limited, when "0" 0 is entered for the ~~"maximum number of recipients"~~, maximum number of recipients, the number of mobile stations that may receive information is not limited; and

~~"Contents"~~ contents of information to be displayed on a display/input device of the mobile station that is a distribution destination.

17. (Previously added)

The method of claim 7 including the steps of:

receiving mail from a mobile phone and storing of any location information included in the mail in a database of the server;

using the search unit of the server to examine an effective range designation for the information included in the received mail;

storing the location information in the database at a location identified by a mobile phone number for the mobile telephone number;

searching the database to acquire the user names of all the mobile stations present within an area described by a radius originating at a center of the designated communication area;

determining whether the number of mobile stations located in the effective range is greater than the specified number of message recipients;

searching a personal information table in the server to obtain user names for mobile stations for which personal information matches a selected category of personal information to reduce the number of mobile stations to be equal or smaller than the maximum number of recipients;

outputting from the server the message to the mobile stations selected as destinations not exceeding the specified number.

18. (Previously added)

The method of claim 7 including the steps of:

periodically requesting the GPS controller in a particular mobile station to determine the location of the particular mobile station;

having the GPS controller generate GPS data of the location (latitude and longitude) of the mobile station;

transmitting the obtained GPS data to the server including with the generated GPS data the personal information of the user;

using the GPS data or the personal information included in the transmitted information to update that information in the database of the server;

determining whether the mobile station has moved and whether its location is in the effective range determined by information in the server database, and when the location of the mobile station falls in the specific effective range of the designated communication area having the message transmitted to the pertinent mobile station;

having the server decrement by one the maximum number of recipients of the message yet to receive the message;

terminating processing when the mail has been transmitted to the specified number of recipients.

19. (Currently amended)

The computer program product of claim 10 including software for providing information in a server database correlated to each user's mobile station number arranged as follows:

the user's phone number or name;

a ~~"message ID"~~ message ID which is used by the mobile station to manage received time-space information;

a ~~"category"~~ category reflecting the user's personal interests used to determine a reduced number of distribution destinations of transmission information when the number of mobile stations present in the ~~"effective range"~~ effective range exceeds a ~~"maximum number of recipients";~~ maximum number of recipients;

an ~~"effective time"~~ effective time which provides the date on which transmission information becomes invalid;

an ~~"effective range designation method"~~ effective range designation method for designating the locational range of a mail distribution destination for the mobile station when ~~"1"~~ 1 is entered for the ~~"effective range designation method"~~ effective range designation method an absolute effective range designation is used; when ~~"2"~~ 2 is entered, it means a relative effective range designation is used;

an ~~"effective range"~~ effective range numerical value that specifically limits the locational range of the mail distribution destination; when ~~"1"~~ 1 is entered for the ~~"effective range designation method"~~ effective range designation method the ~~"effective range"~~ effective range is a set of numerical values comprising the latitude and the longitude at the center of the locational range of a mail distribution destination and the radius of the range; when ~~"2"~~ 2 is entered for the ~~"designation method"~~ designation method, a pair of two numerical values comprising the user name of a mobile station located at the center of the locational range of a mail distribution destination and the radius of the range;

a ~~"maximum number of recipients"~~ maximum number of recipients lists the maximum number of mobile stations to which information is to be transmitted when the number of destinations is limited; when ~~"0"~~ 0 is entered for the ~~"maximum number of recipients"~~, maximum number of recipients, the number of mobile stations that may receive information is not limited; and

~~"Contents"~~ contents of information to be displayed on a display/input device of the mobile station that is a distribution destination.

20. (Previously added)

The computer program product of claim 19 including:

software to compare the current time with the effective time in the database information of a particular mobile station in order to determine whether the effective time has expired and when the effective time has expired, erasing the information;

software to determine whether a value of 1 (the designation of an absolute location range) has been entered for the effective range designation method and when the absolute effective range has not been entered, requesting the phone number of the current location information (latitude and longitude) of the first mobile station used to designate the relative effective range;

software to perform a search of the database for the locational information (latitude and longitude) of the one mobile station that serves as the center of the relative locational range; and

software to determine whether latitude and longitude indicated by the GPS data of one or more of the other mobile stations fall within the effective range of the one mobile station.